AMENDMENTS TO THE CLAIMS

Listing of the claims:

Claim 1. (Previously amended) A method of isolating and culturing mesenchymal stem cells from cryopreserved umbilical cord blood, comprising the steps of:

thawing cryopreserved umbilical cord blood and adding alpha-minimum essential medium (αMEM) thereto, followed by centrifugation to harvest monocytes;

isolating CD133 positive cells from the obtained monocytes; and

suspending the isolated cells into culture with α-MEM containing at least one of Stem Cell Factor, granulocyte-macrophage colony-stimulating factor (GM-CSF), granulocyte colony-stimulating factor (G-CSF), interleukin-3 (IL-3) and interleukin-6 (IL-6).

Claim 2. (Original) The method as set forth in claim 1, wherein the umbilical cord blood is added with 2-fold volume of the αMEM, overlapped on Ficoll-Hypaque, and then subjected to centrifugation to harvest monocytes.

Claim 3. (Previously amended) The method as set forth in claim 1, wherein the αMEM for culturing monocytes further comprises at least one of an antibiotic, an anti-fungal agent, glutamine and fetal bovine serum.

Claim 4. (Currently amended) The methods set forth in claim 1, wherein the culture in the αMEM contains Stem Cell Factor, GM-CSF, G-CSF, IL-3 and IL-6.

Claim 5. (Previously presented) The method as set forth in claim 3, wherein the αMEM for culturing monocytes further comprises an antibiotic, an anti-fungal agent, glutamine and fetal bovine serum.

Claim 6. (New) The method of claim 3, wherein the antibiotic is selected from penicillin G, streptomycin sulfate, or a combination thereof.

Claim 7. (New) The method of claim 3, wherein the antifungal agent is amphotericin B.

Claim 8. (New) The method of claim 1, wherein the isolated mesenchymal stem cells are negative for CD14, CD34, CD45 indicators and are positive for SH2, SH3, C29, CD44, CD90, and CD166 indicators.